

**From:** [Peterson, Lance](#)  
**To:** [Sheldrake, Sean](#)  
**Subject:** Gasco November 16th HC&C Status Call Summary  
**Date:** Thursday, November 17, 2016 12:56:16 PM

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Sean, the 11/16 DEQ/Anchor call pretty much followed the outline below. Comments on the "Evaluation of Transducer Drift and Calibration Data" and "Gasco Groundwater Modeling Report" will be provided to NW Natural on or before 11/23. DEQ acknowledged that the HC&C system is transitioning from the commissioning phase to long term operation. The commissioning phase is defined as the data collection period to support the long term approach for performance monitoring, system monitoring and inflow/material management. DEQ will submit a letter to NW Natural after the Thanksgiving holiday summarizing the process to finalize the HC&C status. Dana stated this would include acknowledgment that they are no longer under testing protocol and the path forward for completing/finalizing documents (PMP, O&M Manual and Materials Mgmt Plan) by the end of March 2017.

Lance

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**From:** Sheldrake, Sean [mailto:[sheldrake.sean@epa.gov](mailto:sheldrake.sean@epa.gov)]  
**Sent:** Wednesday, November 16, 2016 3:15 PM  
**To:** BAYUK Dana <[dana.bayuk@state.or.us](mailto:dana.bayuk@state.or.us)>  
**Cc:** Coffey, Scott <[CoffeySE@cdmsmith.com](mailto:CoffeySE@cdmsmith.com)>; Gamache, Matthew <[GamacheM@cdmsmith.com](mailto:GamacheM@cdmsmith.com)>; LARSEN Henning <[henning.larsen@state.or.us](mailto:henning.larsen@state.or.us)>; Peterson, Lance <[PetersonLE@cdmsmith.com](mailto:PetersonLE@cdmsmith.com)>  
**Subject:** Re: NW Natural, Talking Points for November 16th HC&C Status Call

Thanks Dana, I'll ask CDM to get back to you directly while I'm out.

S

Sean Sheldrake, Unit Diving Officer, RPM  
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Sent from my iPhone

On Nov 15, 2016, at 2:38 PM, BAYUK Dana <[dana.bayuk@state.or.us](mailto:dana.bayuk@state.or.us)> wrote:

Afternoon Sean.

I've inserted DEQ's proposed talking points into the e-mail DEQ sent to Anchor regarding tomorrow's topics for discussion. Our points are indented and in italics.

I'd like to talk about each during tomorrow morning's call to prep for the afternoon

call.

Let me know if you have questions and hope your day is going well.

Dana

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This e-mail provides the topics list for the call on Wednesday November 16<sup>th</sup> (3-5p). DEQ reviewed NW Natural's September 9, 2016 e-mail proposing steps and a schedule for finalizing the status of the HC&C system. The purpose of the call is to discuss the status of the process for finalizing the status of the HC&C system.

From DEQ's standpoint, finalizing the status of the HC&C system involves completing the following steps:

- DEQ and EPA completing reviews of commissioning data collection and/or data analysis submittals, including:
  - "Evaluation of Transducer Drift and Calibration Data," dated August 5, 2016 (review complete);

*DEQ concludes that:*

- 1) *the data evaluation should rely on the sum of the total error associated with groundwater and river stage water level measurements*
  - 2) *the performance monitoring criterion for determining gradient control and capture should be increased to 0.1-feet;*
  - 3) *frequency of manual measurements should be increased to bi-weekly at river staff gages and control wells;*
  - 4) *frequency of manual measurements should be increased to weekly at monitoring well and piezometers that do not consistently meet the criterion of 0.1-feet; and*
  - 5) *additional manual measurement QA/QC control should be evaluated, identified, and implemented.*
- "Proposed Revisions to the NW Natural Gasco Groundwater Monitoring Program," submitted September, 12 2016 (DEQ commented on proposal by phone on October 6, 2016); and

*DEQ did not approve NW Natural's proposal determining that:*

- 1) *insufficient information is presented in the proposal to support NW Natural's conclusions regarding the status and data needs of the RI/FS work being done on the Gasco Site and Siltronic Site; and*
- 2) *the number of parameters for which data trends plots were prepared is inadequate to support NW Natural's proposals.*

*DEQ will provide written comments on the proposal in time for*

*incorporation into the next semiannual sampling event scheduled for March 2017.*

- Deep Alluvium WBZ gradient analysis and particle tracking evaluation included in the “Gasco Groundwater Modeling Report, NW Natural Gasco Site,” dated October 14, 2016 (currently in review by DEQ and EPA).

*DEQ concludes that additional documentation, discussion, and modeling is needed to support the analysis, including:*

- 1) *Table with all the nested monitoring wells referred to in the last sentence of the section;*
- 2) *Comparison of the measured and simulated heads at each well, and an expanded discussion about the vertical gradients;*
- 3) *Identification of a period when the HC&C pumping rate was lower, and discussion of the impacts to the measured and simulated vertical gradients at these same nested wells; and*
- 4) *Additional model run(s) without any HC&C pumping, reproduction Figures 5-4, 5-5a and 5-5b, and discussion of natural flow path, discharge points and timing of the particles shown in the new version of the figures.*

- Completion of evaluations and presentation of recommendations for operating and maintaining the HC&C system, including extraction well rehabilitation and treatment methods and maintenance schedule, including triggers, and piping cleanouts (to be completed by NW Natural).
- Completion of data collection and data analysis relevant to managing material generated during groundwater treatment, based on the technical memorandum, “Findings from Testing of Gasco Site Groundwater for Rhone Poulenc Constituents,” dated October 12, 2016 (in DEQ review).
- Incorporating information and data collected during commissioning into the following documents:
  - “Hydraulic Control and Containment System Capture Performance and Monitoring Plan – NW Natural Gasco Site,” dated May 1, 2015 (HC&C System PMP);

*NW Natural should revise and resubmit to reflect the findings of the commissioning.*

- “Hydraulic Control and Containment System Operations and Maintenance Manual, NW Natural Gasco Site,” dated May 1, 2015; and

*NW Natural should revise and resubmit to reflect the findings of the commissioning.*

- “Contaminated Materials Management Plan – NW Natural Gasco Site,” dated

February 23, 2016.

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- DEQ's review and approval of the documents listed above.

*Going forward, updates to the PMP, O&M Manual, and CMMP to be submitted as revised sections for insertion and replacement into corresponding locations on an annual basis.*

The purpose of the call is to discuss the current status of each of the items listed above and a process for finalizing the status of the HC&C system.

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